

### **ABSTRACT OF THE DISCLOSURE**

A method and apparatus for debris removal from a reflecting surface of an EUV collector in an EUV light source is disclosed which may comprise the reflecting surface comprises a first material and the debris comprises a second material and/or compounds of the second material, the system and method may comprise a controlled sputtering ion source which may comprise a gas comprising the atoms of the sputtering ion material; and a stimulating mechanism exciting the atoms of the sputtering ion material into an ionized state, the ionized state being selected to have a distribution around a selected energy peak that has a high probability of sputtering the second material and a very low probability of sputtering the first material. The stimulating mechanism may comprise an RF or microwave induction mechanism.